

CLAIMS

1. A method for producing a high-strength superplastic material, wherein after the application of a supersonic wave to a metal material, the metal material is subjected to a heating treatment at a temperature obtained by multiplying a melting point of the metal material represented by absolute temperature by 0.35 to 0.6.

2. The method for producing a high-strength superplastic material according to claim 1, wherein the metal material is a high damping metal material having a specific damping capacity of not less than 10%.

3. The method for producing a high-strength superplastic material according to claim 2, wherein the high damping metal material having a specific damping capacity of not less than 10% is Mg or an Mg alloy.

4. The method for producing a high-strength superplastic material according to claim 1, 2 or 3, wherein the temperature obtained by multiplying a melting point of the metal material represented by absolute temperature by 0.35 to 0.6 is the recrystallization temperature of the metal material.